THIS PAGE IS INSERTED BY OIPE SCANNING AND IS NOT PART OF THE OFFICIAL RECORD

Best Available Images

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

BLACK BORDERS

TEXT CUT OFF AT TOP, BOTTOM OR SIDES

FADED TEXT

BLURRY OR ILLEGIBLE TEXT

SKEWED/SLANTED IMAGES

COLORED PHOTOS HAVE BEEN RENDERED INTO BLACK AND WHITE

VERY DARK BLACK AND WHITE PHOTOS

UNDECIPHERABLE GRAY SCALE DOCUMENTS

IMAGES ARE THE BEST AVAILABLE COPY. AS RESCANNING WILL NOT CORRECT IMAGES, PLEASE DO NOT REPORT THE IMAGES TO THE PROBLEM IMAGE BOX.

nixon

WHAT IS CLAIMED IS:

1. A transparent coloring composition comprising:

an organic-inorganic composite pigment comprising fine white inorganic particles and an organic pigment adhered to surface of the respective fine white inorganic particles, primary particles of said composite pigment having an average particle diameter of 1 to 100 nm, and

a solvent.

- 2. A transparent coloring composition according to claim 1, wherein a surface modifier layer is disposed between the surface of the respective fine white inorganic particles and the organic pigment.
- 3. A transparent coloring composition according to claim
 2, wherein the amount of the surface modifier coated is 0.01
 to 15.0% by weight, calculated as C, based on the weight of
 the fine white inorganic particles.
- 4. A transparent coloring composition according to claim 1, wherein the amount of the organic pigment adhered onto the surface of the respective fine white inorganic particles is 1 to 500 parts by weight based on 100 parts by weight of the fine white inorganic particles.
- 5. A transparent coloring composition according to claim 1, wherein the organic-inorganic composite pigment dispersed

in the transparent coloring composition has a dispersion average particle diameter (Dd_{50}) of not more than 300 nm and a dispersion maximum particle diameter (Dd_{99}) of not more than 1,000 nm.

- 6. A transparent coloring composition according to claim 5, wherein the organic-inorganic composite pigment dispersed in the transparent coloring composition has a dispersion particle diameter (Dd_{84}) of not more than 600 nm and a geometrical standard deviation (Dd_{84}/Dd_{50}) of the dispersion particle diameter (Dd_{84}) to the dispersion average particle diameter (Dd_{50}) of not more than 3.00.
- 7. A transparent coloring composition according to claim 1, wherein the organic-inorganic composite pigment has a volume-average particle diameter (Dp₅₀) of not more than 5.00 μ m, and a volume maximum particle diameter (Dp₉₉) of not more than 12.00 μ m.
- 8. A transparent coloring composition according to claim 1, further comprising a transparent resin containing at least one acid group and/or latent acid group.
- 9. A transparent coloring composition according to claim 8, wherein the amount of the transparent resin having at least one acid group and/or latent acid group contained in the composition is 5 to 500 parts by weight based on 100 parts by weight of the organic-inorganic composite pigment.

- 10. A transparent coloring composition according to claim 8, wherein the organic-inorganic composite pigment dispersed in the transparent coloring composition has a dispersion average particle diameter (Dd_{50}) of not more than 300 nm and a dispersion maximum particle diameter (Dd_{99}) of not more than 1,000 nm.
- 11. A transparent coloring composition according to claim 10, wherein the organic-inorganic composite pigment dispersed in the transparent coloring composition has a dispersion particle diameter (Dd_{84}) of not more than 600 nm and a geometrical standard deviation ($\mathrm{Dd}_{84}/\mathrm{Dd}_{50}$) of the dispersion particle diameter (Dd_{84}) to the dispersion average particle diameter (Dd_{50}) of not more than 3.00.
- 12. A transparent coloring composition according to claim 8, further comprising a photo-radical polymerization initiator, and a polyfunctional monomer having two or more ethylenically unsaturated double bonds.
- 13. A transparent coloring composition according to claim 12, wherein the amount of the polyfunctional monomer is 5 to 300 parts by weight based on 100 parts by weight of the transparent resin.
- 14. A transparent coloring composition according to claim8, further comprising a photo-acid generator.

- 15. A transparent coloring composition according to claim 12 or 14, wherein the organic-inorganic composite pigment dispersed in the transparent coloring composition has a dispersion average particle diameter (Dd_{50}) of not more than 300 nm and a dispersion maximum particle diameter (Dd_{99}) of not more than 1,000 nm.
- 16. A transparent coloring composition according to claim 15, wherein the organic-inorganic composite pigment dispersed in the transparent coloring composition has a dispersion particle diameter (Dd_{84}) of not more than 600 nm and a geometrical standard deviation ($\mathrm{Dd}_{84}/\mathrm{Dd}_{50}$) of the dispersion particle diameter (Dd_{84}) to the dispersion average particle diameter (Dd_{50}) of not more than 3.00.
- 17. A color filter comprising a film-forming material made of the transparent coloring composition as defined in any of claims 8, 12 and 14.